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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,463	05/24/2001	Gregory J. Wilson	291958157US3	4951

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EXAMINER

VALENTINE, DONALD R

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/866,463

Applicant(s)

WILSON ET AL.

Examiner

Donald R. Valentine

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 and 23-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10, 12-14, 23-24 and 27-35 is/are rejected.
- 7) ☒ Claim(s) 7-9, 11, 25-26 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-6, 10, 12-14, 23-24 and 27-35 re rejected under 35 U.S.C. 103(a) as being unpatentable over Woodruff et al (6,497,801) in view of Reed (4,828,654).

Woodruff et al show a "processing container" (reactor vessel) with a principal fluid flow chamber (10) Figure 14. There is a plurality of concentric anodes in the chamber and they are independently coupled to a power supply and a controller. (See Fig. 1a). Dielectric compartments are shown, col. 5, lines 45-60, (claims 2 and 4 of applicant). An inert material is disclosed as an anode element, col. 6, lines 1-5. (Applicant's

claim 6). As for claim 12, Woodruff et al disclose a pump. (Col. 5, lines 25-32).

The reference does not show a "computer operable medium including instructions that cause unique electric currents to be applied concurrently to different concentric anodes'.

Reed shows a "processing chamber" (electroplating cell), which has segmented anodes, coupled independently to a controller, (col. 5, and lines 63-68) which is controlled by a computer (col. 7, line 10-22). Information (electroplating data) is developed which is utilized to independently control the individual segmented anodes. See col. 6, lines 1-68 and col. 7, lines 4-22. Although Reed shows u-shaped anode segments, Reed also teaches that other configurations of the anodes may be effective and may be suggested by the shape of the workpiece, which in Reed's case is rectangular. See col. 6, lines 30-43. Reed further discloses that the segments may be circular in which the workpieces may be circular disc-like wafers. (See col. 6, lines 29-33)

It would be considered within the skill of the art to control the individually segmented anodes of Woodruff et al by the computer means shown by the secondary reference to Reed because both references provide individually controlled segments of anodes in which the electric currents are controlled for the purpose of providing uniform electroplating on a planar workpiece surface (disc-like wafer). Such an adaptation would not appear to provide any unexpected results.

***Allowable Subject Matter***

4. Claims 7-9, 11, 25-26, 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: The references of record do not show or suggest a processing chamber with a plurality of concentric anodes, a controller coupled to the concentric anodes, the controller having a computer operable medium to cause unique electric currents to be applied to the different concentric anodes and wherein the chamber comprises a plurality of nozzles to provide flow of electrochemical processing fluid to the chamber to provide vertical and radial fluid flow components that combine to generate a substantially uniform normal flow component radially across the surface of a workpiece.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald R. Valentine whose telephone number is 571-272-1250. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donald R. Valentine  
Primary Examiner  
Art Unit 1742

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June 7, 2004